WHAT IS CLAIMED IS:

1. A data encrypting device comprising:

encryption key extracting means for extracting a portion of compressed data, acquired by compressing data by a compression processing, as encryption key data; and

encryption means for encrypting the compressed data by changing the portion, extracted as the encryption key data, of the compressed data.

2. The data encrypting device according to claim 1, wherein the compression processing is a processing by which if even a portion of compressed data is not correct, the compressed data cannot be expanded.

3. The data encrypting device according to claim 1, wherein the encryption means replaces the portion, extracted as the encryption key data, of the compressed data with data different from the encryption key data.

4. The data encrypting device according to claim 1, wherein the encryption means deletes the portion, extracted as the encryption key data, of the compressed data.

5. The data encrypting device according to claim 1, wherein the encryption means adds other data to the portion, extracted as the encryption key data, of the compressed data.

6. The data encrypting device according to claim 1, wherein a predetermined range of the compressed data from the beginning is made the encryption key data.

7. A data decoding device comprising:

encryption key extracting means for extracting a portion

of compressed data acquired by compressing data by a compression
processing, as the encryption key data;

encryption means for encrypting the compressed data by
changing the portion, extracted as the encryption key data, of

5   the compressed data; and

compressed data decoding means for decoding the combined
data to the compressed data before encryption by
combining the encryption key data and the compressed data after
encryption, both of which are generated from the same compressed

10   data.

8. An image data storing device comprising:

compression means for compressing image data by a
compression processing;

encryption key extracting means for extracting a portion

15   of compressed data acquired by compressing the image data by
the compression means, as encryption key data;

encryption means for encrypting the compressed data by
changing the portion, extracted as the encryption key data, of
the compressed data;

20   encryption key storing means for storing the encryption
key data extracted by the encryption key extracting means;

encrypted data storing means for storing encrypted data
acquired by encrypting the compressed data by the encryption
means;

25   management information storing means for storing
management information showing correspondence between the
encryption key data and the encrypted data both of which are

acquired from the same compressed data;

compressed data decoding means that extracts the encryption key data and the encrypted data, both of which are acquired from the same compressed data, from the encryption key

5 storing means and the encrypted data storing means on the basis of the management information stored in the management information storing means and combines them to decode them to the original compressed data; and

expansion means for expanding the compressed data decoded

10 by the compressed data decoding means to the image data before compression.

9. The image data storing device according to claim 8, wherein the encryption means replaces the portion, extracted as the encryption key data, of the compressed data with data

15 different from the encryption key data.

10. The image data storing device according to claim 8, wherein the encryption means deletes the portion, extracted as the encryption key data, of the compressed data.

11. The image data storing device according to claim 8,

20 wherein the encryption means adds other data to the portion, extracted as the encryption key data, of the compressed data.

12. The image data storing device according to claim 8, wherein a predetermined range from the beginning of the compressed data is made the encryption key data.

25 13. An image data storing device comprising:

compression means for compressing image data by a compression processing;

encryption key extracting means for extracting a portion of compressed data acquired by compressing the image data by the compression means, as encryption key data;

encryption means for encrypting the compressed data by

5 changing the portion, extracted as the encryption key data, of the compressed data;

encrypted data storing means for storing encrypted data acquired by encrypting the compressed data by the encryption means; and

10 decoding information outputting means for outputting the encryption key data extracted by the encryption key extracting means and specific information for specifying the encrypted data corresponding to this encryption key data in association with each other in a predetermined form to an external user.

15 14. The image data storing device according to claim 13, further comprising:

decoding information inputting means for inputting the encryption key data and specific information associated with this;

20 compressed data decoding means that extracts the encrypted data corresponding to the specific information input through the decoding information inputting means from the encrypted data storing means and combines the encrypted data with the input encryption key data to decode the combined

25 encrypted data to the compressed data before encryption; and

expansion means for expanding the compressed data decoded by the compressed data decoding means to the image data before

compression.

15. The image data storing device according to claim 13, wherein the compression processing is a processing by which if even a portion of compressed data is not correct, the compressed

5   data cannot be expanded.

16. The image data storing device according to claim 13, wherein the encryption means replaces the portion, extracted as the encryption key data, of the compressed data with data different from the encryption key data.

10   17. The image data storing device according to claim 13, wherein the encryption means deletes the portion, extracted as the encryption key data, of the compressed data.

18. The image data storing device according to claim 13, wherein the encryption means adds other data to the portion of

15   the compressed data extracted as the encryption key data.

19. The image data storing device according to claim 13, wherein a predetermined range from the beginning of the compressed data is made the encryption key data.

20. An image forming apparatus comprising:

20   reading means for reading an original document to capture image data corresponding thereto;

compression means for compressing the image data by a compression processing;

encryption key extracting means for extracting a portion

25   of compressed data, acquired by compressing the image data by the compression means, as encryption key data;

encryption means for encrypting the compressed data by

changing the portion, extracted as the encryption key data, of the compressed data;

encryption key storing means for storing the encryption key data extracted by the encryption key extracting means;

5   encrypted data storing means for storing encrypted data acquired by encrypting the compressed data by the encryption means;

management information storing means for storing management information showing correspondence between the

10   encryption key data and the encrypted data both of which are acquired from the same compressed data;

compressed data decoding means that extracts the encryption key data and the encrypted data, both of which are acquired from the same compressed data, from the encryption key

15   storing means and the encrypted data storing means on the basis of the management information stored in the management information storing means and combines them to decode them to the original compressed data;

expansion means for expanding the compressed data decoded

20   by the compressed data decoding means to the image data before compression; and

printing means for forming and outputting an image corresponding to the expanded image data on recording paper.